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FINAL REPORT

Groundwater Contamination Study
Forbes Field
Air National Guard Base
Shawnee County, Kansas

AD-A160 599

Prepared For:
United States Air Force
Occupational and Environmental
Health Laboratory (OEHL)
Brooks Air Force Base, Texas

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Volume II - Estimated Costs

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Volume II

ESTIMATED COSTS OF RECOMMENDED ACTIONS

The costs for implementing the recommendations outlined in Section 5 of this report have been estimated and are provided on the following tables herein attached:

- Table 1: Summary of Total Costs
- Table 2: Breakdown of Estimated Manpower by Labor Category
- Table 3: Summary Breakdown by Activity
- Table 4: Analytical Manpower Requirements
- Table 5: Summary of Estimated Other Direct Costs
- Table 6: Estimate of Subcontract Drilling Costs.

Manpower hours and costs were computed using Weston's contract rates for 1985. Drilling subcontract costs are based upon rates quoted by Terra Con Consultants of Lexana, Kansas, using equipment mobilized from that office. Other direct costs were estimated based on rates prevailing on May 15, 1985, and airline fares, in particular, may be subject to change in the near future.

Information For

Revised dated *X*

Comments

see vol. 1

By

D. J. Mather

Date

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TABLE 1: SUMMARY OF TOTAL COSTS

	<u>MANPOWER</u>	<u>DRILLING</u>	<u>ODC'S</u>	<u>TOTAL</u>
Site Investigation	22,163	6,163	6,672	34,998
Report	7,325	-0-	950	8,275
	29,488	6,163	7,622	43,273

TABLE 2: BREAKDOWN OF ESTIMATED MANPOWER BY LABOR CATEGORY

	SENIOR LEVEL	MID-LEVEL		JUNIOR LEVEL		TECHNICIAN	TOTAL			
		NH	\$	NH	\$					
Site Investigation	152	9511	126	5489	161	4698	93	2465	532	22163
Report	38	2378	68	3633	20	584	20	530	166	7325
	190	11,889	214	9322	161	5282	113	2995	698	29,468

TABLE 3
MANPOWER BREAKDOWN BY ACTIVITY; RECOMMENDATIONS

<u>ACTIVITY</u>	<u>MANPOWER LEVEL</u>	<u>FORBES FIELD</u>
<u>DIRECT LABOR</u>		
Set up, calibration and cleanup	Senior (S) Mid-Level (M-L) Junior (J) Technician (T)	10 30 10 10
Field Testing	S M-L J T	20 60 100 40
Report Preparation	S M-L J T	38 88 20 20
Direct Labor Summary	S M-L J T	30 90 110 50
<u>Subtotal</u>		<u>280</u>
Analytical Labor	S M-L J T	15 36 51 43
		<u>145</u>
<u>Project Management:</u>		
Planning and Administration		65
Quality Assurance		13
Report Review		13
Subcontract Management		16
<u>Subtotal</u>		<u>107</u>
<u>Grand Total</u>	532	

TABLE 4: ANALYTICAL MANPOWER REQUIREMENTS

ANALYTE	MEDIUM	SAMPLES	SENIOR LEVEL			MID-LEVEL			JUNIOR LEVEL			TECHNICIAN			TOTAL		
			NH	\$	NH	\$	NH	\$	NH	\$	NH	NH	\$	NH	\$	NH	\$
VOA	GM, SM	28	13	813	31	1350	44	1284	37	981						4428	
Oil & Grease	GM, SM	28	2	125	5	218	7	204	6	159	20	706					
TOTALS		15	938	36	1568	51	1488	43	1140	145	5134						

TABLE 5: SUMMARY OF ESTIMATED OTHER DIRECT COSTS, CONFIRMATION STAGE

ITEM	UNIT	NO. OF UNITS	COST	
			UNIT COST	UNIT COST
Air Transportation	Round Trip	6	480	2430
Rental Car	Day	11	45	495
Local Transportation	Round Trip	6	60	360
Per Diets	Man Day	22	76	1672
Equipment Rental				
Hnu	Day	7	20	140
Expendable Supplies	Miscellaneous			
Shipping	Crate	6	75	75
Telephone	Call	40	100	600
Graphics	Each	6	5	200
Printing	Page	5000	75	450
Surveying	Round	1	10	500
			250	250
				\$7,622

¹Based upon 50 page draft, 1 draft, 25 copies, and 75 page final, 50 copies.

TABLE 6: ESTIMATE OF SUBCONTRACT DRILLING COSTS

<u>ITEM</u>	<u>UNIT COST</u>	<u>COST</u>
Mobilization	350	350
<u>5 Shallow Monitoring Wells</u>		
Drilling and continuous spilt-spoon sampling (75)	19.50/ft.	1463
Well installation (5)	50+(\$6/ft x 15)	700
Protective casings (5)	200	1000
Set up time (5)	70/hr	350
<u>1 Deep Monitoring Well</u>		
Soil boring (10')	6/ft.	60
Rock boring (30')	25/ft	750
Well installation (1)	80+(\$12/ft x 10')	200
Protective casing (1)	250	250
Set up time (2)	70/hr	140
<u>Decontamination Equipment (5)</u>		
Per Diem (10)	100/day	500
TOTAL	40/man-day	<u>400</u>
		\$6163